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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
PEREZ, ANGELICA	
ART UNIT	PAPER NUMBER
2618	

MAIL DATE	DELIVERY MODE
10/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/899,128	JENSEN, ERIC	
	Examiner	Art Unit	
	Perez M. Angelica	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5 and 7-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5 and 7-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 8, 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe (Tayloe et al., Patent No: 5,095,500) in view of Manabe (Manabe, Shinichi; US Patent No.: 5,423,067 A) and further in view of Sheffield (Sheffield, John P.; US Patent No.: 6,603,966 B1).

Regarding claims 1 and 17, Tayloe teaches of a method for collecting and processing uplink received signal level data and geolocation data over a wireless system (column 2, lines 39-47), comprising the steps of: gathering uplink received signal strength data corresponding to identified mobile units (column 2, lines 52-55 and column 4, lines 8- 11, where the MS makes signal strength measurements and sends them to the BS, thus in an uplink direction, received by the BS); gathering geolocation location data corresponding to mobile units (column 2, lines 55-62 and column 4, lines 8-10); forming data pairs by identifying the gathered geolocation data and the gathered signal strength corresponding to the same identified mobile units (column 2, lines 55-62 and column 4, lines 32-36; where the pair are the generated representation) and generating a set of data pairs correlating measured signal strength values to specific

geographic locations throughout the wireless system (column 2, lines 55-62; column 4, lines 18-21 and column 5, lines 41-49).

Although Tayloe does not specifically show where the data corresponds to the same units, it is well known in the art, that the data should be data of units of interest to the system, thus, the same units.

However, in related art concerning a digital mobile communications system and method for providing intensity/coverage reference maps using base stations and mobile stations, Manabe teaches where identifying the gathered location data and the gathered strength data corresponding to the same mobile units to form data pairs correlating a measured signal strength at a known geolocation (column 6, lines 26-43 and column 7, lines 5-15 and table 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's gathered location data and gathered strength data with corresponding to the same mobil unit with Manabe's data regarding the same units in order to maintain accurate data corresponding to the system analyzed, as taught by Manabe.

Tayloe and Manabe do not explicitly mention the word time-stamp, however, it is implicit in their teachings (see table 1, where geographic position and signal strength level are measured according to a time, "time-stamp").

In related art concerning a method and system for optimizing performance of a mobile communication system, Sheffield teaches of collecting data such as geolocation position and RSSI data received within sufficient close temporal proximity to a reference

time stamp to identify data from the same mobile unit (The time stamp of the gathered data is included, so that the data can be analyzed at a later time. See column 4, lines 24-27,36-40; column 7, lines 34-44. In addition, the "time reference" corresponds to the time stamp of the geolocation data collected according to the specification of the present application, the examiner could not identify an additional reference time).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's and Manabe's gathered location data and gathered strength data corresponding to the same mobil unit with Sheffield's time-stamp of data in order to save the data for further analyzes, as taught by Sheffield.

Regarding claim 2, Tayloe, Manabe and Sheffield teach all the limitations according to claim 1. Tayloe further teaches where: the signal strength data is collected by measuring the signal strength of a signal received by a cell site, from a mobile wireless unit (columns 2, lines 44-47 and column 4, lines 22-25).

Regarding claim 3, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. In addition, Tayloe teaches where the signal strength data is collected by measuring the signal strength of a signal received by a wireless mobile unit, from a cell site (columns 2, lines 44-47 and column 4, lines 22-25).

Regarding claim 4, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches where: the geographic location data is determined by triangulation of said mobile unit with respect to a plurality of stationary cell site antennae (column 8, lines 63-68).

Regarding claim 5, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches where the geographic location data is determined with reference to a set of global positioning satellites (column 9, line 4).

Manabe teaches of the identification of the gathered location data and gathered strength data corresponding to the same mobil unit (column 8, lines 1-5 and 11-17; where the "identifier code" and "location code" corresponds to a specific unit).

It would have been obvious to a one of ordinary skill in the art at the time the invention was made to combine Tayloe's gathered location data and gathered strength data corresponding to the same mobil unit with Manabe 's same unit data collection with the purpose of maintaining accurate positioning of each mobile station.

Regarding claim 8, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches of analyzing the set of data pairs to evaluate the effective RF propagation within the wireless system (column 6, lines 59-61; where the evaluated RF propagation leads to the necessary adjustments in the RF planning).

Regarding claim 11, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches of gathering drop call incident data from the system; and identifying the geolocation corresponding to the dropped call incidents (column 7, lines 49-59).

Regarding claim 12, Tayloe, Manabe and Sheffield teach all the limitations of claim 11. Tayloe further teaches of generating a set of data points correlating drop call incidents with geolocation of occurrence (column 7, lines 49-59; where the correlation provides the information to adjust the electromagnetic coverage of the system).

Regarding claim 13, Tayloe, Manabe and Sheffield teach all the limitations of claim 12. Tayloe further teaches of analyzing the drop call geolocation data set to determine an effective implementation for addressing dropped calls (column 7, lines 51-59).

Regarding claim 14, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches of gathering blocked call incident data from the system; and identifying the geolocation corresponding to said blocked call incidents (column 4, lines 48-50, column 5, lines 42-52 and column 8, lines 24-35).

Regarding claim 15, Tayloe, Manabe and Sheffield teach all the limitations of claim 14. In addition, Tayloe further teaches of generating a set of data points correlating blocked call incidents with geolocation of occurrence (column 4, lines 61-67).

Regarding claim 16, Tayloe, Manabe and Sheffield teach all the limitations of claim 15. In addition, Tayloe teaches of analyzing the blocked call geolocation data set to determine an effective implementation for addressing blocked calls (column 8, lines 36-49 and column 5, lines 50-52).

Regarding claim 18, Tayloe teaches of an apparatus that performs the method of claims 1. Tayloe also teaches where the apparatus (column 7, lines 14-16) comprises RF signal measurement equipment for receiving signal strength data corresponding to mobile units (column 3, lines 46-50); storage for combining the signal strength data and the geolocation data (column 16-20 of the abstract; where the data needs to be "stored" before it is correlated); a processor for identifying signal strength data elements corresponding to geolocation data elements, for generating a set of data pairs

correlating signal strength values to geographic locations within the wireless system (column 2, lines 55-62; where the processor is referred a s the "central operation and maintenance unit").

Although Tayloe does not specifically show where the data corresponds to the same units, it is well known in the art, that the data should be data of units of interest to the system, thus, the same units.

However, in related art concerning a digital mobile communications system and method for providing intensity/coverage reference maps using base stations and mobile stations, Manabe teaches where identifying the gathered location data and the gathered strength data corresponding to the same mobile units to form data pairs correlating a measured signal strength at a known geolocation (column 6, lines 26-43 and column 7, lines 5-15 and table 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's gathered location data and gathered strength data corresponding to the same mobil unit with Manabe's data regarding the same units in order to maintain accurate data corresponding to the system analyzed, as taught by Manabe.

Tayloe and Manabe do not explicitly mention the word time-stamp, however, it is implicit in their teachings (see table 1, where geographic position and signal strength level are measured according to a time, time-stamp").

Sheffield teaches of collecting data such as geolocation position and RSSI data received within sufficient close temporal proximity to a reference time stamp to identify

data from the same mobile unit (The time stamp of the gathered data is included, so that the data can be analyzed at a later time. See column 4, lines 24-27,36-40; column 7, lines 34-44. In addition, the "time reference" corresponds to the time stamp of the geolocation data collected according to the specification of the present application, the examiner could not identify an additional reference time).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's and Manabe's gathered location data and gathered strength data corresponding to the same mobil unit with Sheffield's time-stamp of data in order to save the data for further analyzes, as taught by Sheffield.

3. Claims 7 and 9 -10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tayloe in view of Manabe and Sheffield, and further in view of Montoya (Montoya, Alexander John; US Patent No: 6,400,943).

Regarding claim 7, Tayloe, Manabe and Sheffield teach all the limitations of claim 1. In addition, Tayloe teaches where the correlation includes matching the geolocation data with the signal strength data of a mobile unit based upon the receipt of data corresponding to the same mobile unit (column 13, lines 52-65).

Tayloe, Manabe and Sheffield do not specifically teach where the signal strength and the geolocation are gathered in real-time at a common data receiver.

In further art, Montoya teaches where the signal strength and the geolocation are gathered in real-time at a common data receiver (column 6, lines 9-16).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Manabe's and Sheffield's gathered location

data and gathered strength data corresponding to the same mobil unit with Montoya's real-time measurements in order to determine optimal handoffs thresholds, as taught by Montoya.

Regarding claim 9, Tayloe and Manabe and Sheffield teach all the limitations of claim 1. Tayloe further teaches of identifying the cell site, which gathered each signal strength data measurement corresponding to each geolocation within the wireless system (column 2, lines 49-65 and figures 2, 3 and 4).

Montoya further teaches of determining the identified cell site likely to receive a signal from a mobile unit at each identified geolocation within the wireless system (column 5, lines 9-21; where the location code that identifies helps to decide what base station corresponds to the identified location).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Tayloe's, Manabe's and Sheffield's gathered location data and gathered strength data corresponding to the same mobil unit with Montoya's the identified cells in order to maintain accurate record of the data.

Regarding claim 10, Tayloe, Manabe, Sheffield and Montoya teach all the limitations of claim 9. Montoya further teaches of redefining the projected distribution of likely server cell sites within the wireless system based upon the determination of identified likely cell sites (column 8 lines, 11-17).

Response to Arguments

4. Applicant's arguments with respect to claims 1-5, 7-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angelica Perez whose telephone number is 571-272-7885. The examiner can normally be reached on 6:00 a.m. - 1:30 p.m., Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on (571) 272-4177. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either the PAIR or Public PAIR. Status information for unpublished applications is available through the Private PAIR only. For more information about the pair system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). Information regarding Patent Application Information Retrieval (PAIR) system can be found at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600's customer service number is 703-306-0377.

Angelica Perez
Examiner

MATTHEW ANDERSON
SUPERVISORY PATENT EXAMINER

Art Unit 2618

October 2, 2007